AMENDMENTS TO THE CLAIMS

1. (currently amended) A 38-residue or 39-residue CRFR1 ligand cyclic peptide which binds to CRFR1 with an affinity substantially greater than it binds to CRFR2, which peptide has the following formula, or a nontoxic salt thereof: Y_1-Pro-Pro-R_6-Ser-R_8-Asp-R_{10}-R_{11}-D-Phe-R_{13}-R_{14}-R_{15}-Arg-R_{17}-R_{18}-R_{19}-R_{20}-R_{21}-R_{22}-R_{23}-R_{24}-R_{25}-R_{26}-R_{27}-R_{28}-R_{29}-Gln-Glu-R_{32}-R_{33}-R_{34}-Arg-R_{36}-R_{37}-R_{38}-R_{39}-R_{40}-R_{41}-NH_2 wherein Y_1 is an acyl group having not more than 15 carbon atoms or is radioiodinated tyrosine; R_6 is Ile, Met or Nle; R_8 is Leu or Ile; R_{10} is Leu or CML; R_{11} is Thr or Ser; R_{13} is His, Tyr or Glu; R_{14} is CML or Leu; R_{15} is CML or Leu; R_{17} is Glu, CML, Asn or Lys; R_{18} is Val, CML, Nle or Met; R_{19} is CML, Leu or Ile; R_{20} is Glu, D-Glu or His; R_{21} is Nle, Leu, CML or Met; R_{22} is Ala, D-Ala, Aib, Thr, Asp or Glu; R_{23} is Arg or Lys; R_{24} is Ala, Gln, Ile, Asn, CML or Aib; R_{25} is Asp or Glu; R_{26} is Gln, Asn or Lys; R_{27} is CML, Glu, Gln or Leu; R_{28} is Ala, Lys, Arg or Aib; R_{29} is Gln, Aib or Glu; R_{32} is Aib or an L- or D-isomer of a natural α-amino acid other than Cys; R_{33} is Aib or an L- or D-isomer of Ser, Asn, Leu, Ala, CML or Ile; R_{34} is Lys or Orn; R_{36} is Lys, Orn, Arg, Har, CML or Leu; R_{37} is CML, Leu, Nle or Tyr; R_{38} is Nle, Met, CML or Leu; R_{39} is Glu, Aib or Asp; R_{40} is Ile, Aib, CML, Thr, Glu, Ala, Val, Leu, Nle, Phe, Nva, Gly or Gln; and R_{41} is Ala, Aib, Ile, CML, Gly, Val, Leu, Nle, Phe, Nva or Gln; provided that a cyclizing bond ~~may exist~~ exists between Glu in position 31 and R_{34} and provided further that ~~D-2Nal~~ D-ß-(2-napthyl)alanine(D-2Nal) or D-Leu may be substituted for D-Phe.

2. (currently amended) A peptide according to claim 1 having the formula: (cyclo 31-34)Y_1-Pro-Pro-R_6-Ser-R_8-Asp-Leu-R_{11}-D-Phe-His-R_{14}-Leu-Arg-Glu-R_{18}-Leu-R_{20}-Nle-R_{22}-R_{23}-Ala-R_{25}-Gln-Leu-Ala-R_{29}-Gln-Glu-R_{32}-R_{33}-R_{34}-Arg-R_{36}-R_{37}-Nle-R_{39}-R_{40}-R_{41}-NH_2 wherein Y_1 is an acyl group having not more than 7 carbon atoms; R_{20} is Glu or D-Glu; R_{22} is Ala or Thr; R_{29} is Gln or Glu; R_{32} is His, Aib, Ala, Gly, Leu, Gln or Glu; R_{36} is Lys or Leu; R_{37} is Leu or CML; R_{39} is Glu or Asp; R_{40} is Ile, CML or Glu; and R_{41} is Ile, Aib or Ala; with the remaining variables being as defined in claim ~~2~~ 1.

3. (original) A peptide according to claim 1 having the formula:
(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Glu-His-Ser-Lys-Arg-Lys-Leu-Nle-Glu-Ile-Ile-NH_2, or
(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-CML-Ala-Gln-Gln-Glu-His-Ser-Lys-Arg-Lys- Leu-Nle-Glu-Ile-CML-NH_2; or
(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-CML-Ala-Gln-Gln-Glu-His-Aib-Lys-Arg-Lys- Leu-Nle-Glu-Ile-CML-NH_2.

4. (canceled)

5. (currently amended) A CRF cyclic peptide according to claim 1 having the formula:
Y_1-Pro-Pro-R_6-Ser-R_8-Asp-Leu-R_{11}-D-Phe-His-R_{14}-Leu-Arg-Glu-R_{18}-Leu-R_{20}-Nle-R_{22}-R_{23}-Ala-R_{25}-Gln-Leu-Ala-R_{29}-Gln-Glu-R_{32}-R_{33}-R_{34}-Arg-R_{36}-R_{37}-Nle-R_{39}-R_{40}-R_{41}-NH_2
wherein Y_1 is an acyl group having not more than 7 carbon atoms; R_{20} is Glu or D-Glu; R_{22} is Ala or Thr; R_{23} is Arg or Lys; R_{29} is Gln or Glu; R_{32} is His, D-His, Aib or Ala; R_{36} is Lys or Leu; R_{37} is Leu or CML; R_{39} is Glu or Asp; R_{40} is Ile, CML or Glu; and R_{41} is Ile, Aib or Ala; wherein the remaining variables are as defined in claim 1 ~~2 and wherein the side chains of Glu^{31} and R_{34} may be covalently connected~~.

6. (original) A peptide according to claim 1 wherein R_{18} is Val, R_{22} is Ala, R_{23} is Arg, R_{24} is Ala, R_{25} is Glu, R_{28} is Ala, R_{39} is Glu, and R_{41} is Ile.

7. (original) A peptide according to claim 1 having the following formula, or a nontoxic salt thereof:

(cyclo 31-34)Y_1-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-R_{22}-R_{23}-Ala-Glu-Gln-R_{27}-Ala-Gln-Gln-Glu-R_{32}-R_{33}-Lys-Arg-Lys-Leu-Nle-Glu-R_{40}-Ile-NH_2 wherein R_{22} is Ala or Thr; R_{27} is Leu or CML; R_{32} is His or Aib; R_{33} is Ser or Aib; and R_{40} is Ile or CML.

8. (canceled)

9. (currently amended) A peptide according to claim 1 which is useful as a tracer that selectively ~~bonds~~ binds to CRFR1 wherein ~~Y~~ Y_1 is radioiodinated D-Tyr or L-Tyr.

10. (canceled)

11. (new) A peptide according to claim 1 having the formula:
(cyclo 31-34) Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle- Thr-Lys-Ala-Asp-Gln-Leu-Ala-Gln-Gln-Glu-His-Ser-Lys-Arg-Lys-Leu-Nle-Asp-Ile- Ala-NH_2; or
(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-CML-Ala-Gln-Gln-Glu-His-Ser-Lys-Arg-Lys- Leu-Nle-Glu-Ile-Ile-NH_2; or
(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Glu-His-Aib-Lys-Arg-Lys- Leu-Nle-Glu-Ile-Ile-NH_2.

12. (new) A peptide according to claim 1 having the formula:
(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-CML-Arg-Glu-Val-CML-Glu-Nle-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Glu-His-Ser-Lys-Arg-Lys-Leu-Nle-Glu-Ile-Ile-NH_2, or

(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-CML-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Glu-His-Ser-Lys-Arg-Lys-Leu-Nle-Glu-Ile-Ile-NH_2; or
(cyclo 31-34)Ac-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-CML-Ala-Gln-Gln-Glu-His-D-Ser-Lys-Arg-Lys-Leu-Nle-Glu-CML-Ile-NH_2.

13. (new) A 38-residue or 39-residue CRF agonist cyclic peptide, or a nontoxic salt thereof, which binds to CRFR1 with an affinity substantially greater than it binds to CRFR2, which peptide has the following formula:
Y_1-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-R_{14}-R_{15}-Arg-R_{17}-R_{18}-R_{19}-Glu-Nle-Ala-Arg-Ala-Glu-Gln-R_{27}-Ala-Gln-Gln-Glu-R_{32}-R_{33}-Lys-Arg-R_{36}-R_{37}-Nle-Glu-R_{40}-R_{41}-NH_2
wherein Y_1 is an acyl group having not more than 15 carbon atoms or is radioiodinated tyrosine; R_{14} is CML or Leu; R_{15} is CML or Leu; R_{17} is Glu or CML; R_{18} is Val or CML; R_{19} is CML or Leu; R_{27} is CML or Leu; R_{32} is Aib, His or D-His; R_{33} is Aib, D-Ala, D-Ser or Ser; R_{36} is Lys or CML; R_{37} is CML or Leu; R_{40} is Ile or CML; and R_{41} is Ile or CML; provided that a cyclizing bond exists between Glu in position 31 and Lys in position 34 and provided further that D-ß-(2-napthyl)alanine(D-2Nal) or D-Leu may be substituted for D-Phe.

14. (new) A CRF agonist peptide, or a nontoxic salt thereof, which binds to CRFR1 with an affinity substantially greater than it binds to CRFR2, which peptide has the following formula:
(cyclo 31-34) Y_1-Pro-Pro-Ile-Ser-Leu-Asp-Leu-Thr-D-Phe-His-Leu-Leu-Arg-Glu-Val-Leu-Glu-Nle-Ala-Arg-Ala-Glu-Gln-Leu-Ala-Gln-Gln-Glu-His-Ser-Lys-Arg-Lys-Leu-Nle-Glu-Ile-Ile-NH_2, wherein Y_1 is an acyl group having not more than 15 carbon atoms or is radioiodinated tyrosine, and wherein a cyclizing bond may exist between the side chains of Glu in the 31-position and Lys in the 34-position.